User's Manual

YS1000 Series Replacement Manual

IM 01B08H01-01E

vigilantplant®

YOKOGAWA
Yokogawa Electric Corporation

IM 01B08H01-01E
2nd Edition

Introduction

Thank you for purchasing the YS1000 series single-loop controller (hereinafter referred to as “YS1000”).
This manual specifies the external dimensions, panel cutout, and terminal layout of the compatible types for replacing the earlier single-loop controller models (EBS, I, EK, and HOMAC series), pneumatic 100 line (100 line), YEWSERIES 80 (YS80), and the YS100 series with YS1000 and describes how to mount and remove the YS1000.
Please read through this user’s manual carefully before using the product.
Note that the manuals for the YS1000 comprise the following nine documents:

● Printed manual

Manual Name	Manual Number	Description
YS1500/YS1700 Operation Guide	IM 01B08B01-01E	This manual describes the basic operation method.
YS1310 Operation Guide	IM 01B08D01-01E	This manual describes the basic operation method.
YS1350/YS1360 Operation Guide	IM 01B08E01-01E	This manual describes the basic operation method.

● Electronic manuals contained in the provided CD-ROM

Manual Name	Manual Number	Description
YS1500/YS1700 Operation Guide	IM 01B08B01-01E	This is identical to the printed manual.
YS1500/YS1700 User’s Manual	IM 01B08B01-02E	This manual describes the usage of all functions except the programming and communication functions.
YS1310 Operation Guide	IM 01B08D01-01E	This is identical to the printed manual.
YS1310 User’s Manual	IM 01B08D01-02E	This manual describes the usage of all functions except the communication functions.
YS1350/YS1360 Operation Guide	IM 01B08E01-01E	This is identical to the printed manual.
YS1350/YS1360 User’s Manual	IM 01B08E01-02E	This manual describes the usage of all functions except the communication functions.
YS1000 Series Communication Interface User’s Manual	IM 01B08J01-01E	This manual describes how to use YS1000 in Ethernet, serial, and DCS-LCS communications. For communication wiring, see the Operation Guide.
YSS1000 Setting Software/ YS1700 Programmable Function User’s Manual	IM 01B08K01-02E	This manual describes how to use YSS1000 and YS1700’s programmable function and peer-to-peer communication function.
YS1000 Series Replacement Manual	IM 01B08H01-01E	This manual. It describes the compatibility of installation and wiring with YS100, YS80, EBS, I, EK, HOMAC, and 100 line.

The provided CD-ROM also contains the YS110 manual.

Notice

- The contents of this manual are subject to change without notice as a result of continuing improvements to the instrument’s performance and functions.
- Every effort has been made to ensure accuracy in the preparation of this manual. Should any errors or omissions come to your attention, however, please inform YOKOGAWA Electric’s sales office or sales representative.
- Under no circumstances may the contents of this manual, in part or in whole, be transcribed or copied without our permission.

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How to Use This Manual

Usage

First read through the Operation Guide to understand the basic operations and then read this manual. For the programmable or communication functions, see the respective manuals.

This User's Manual is organized into Chapters 1 to 5 as shown below:

Chapter	Title and Description
1	**Overview** Provides transitions of the single-loop controllers, explanations of terms, and descriptions on replacing with the YS1000.
2	**Replacement with YS100-compatible Type** Describes replacing the YS100 with the YS1000.
3	**Replacement with YS80 Internal Unit-compatible Type and EBS, I, EK, or HOMAC-compatible Type** Describes replacing the YS80 and EBS, I, EK, or HOMAC with the YS1000.
4	**Replacement with YS80-compatible Type** Describes replacing the YS80 with the YS1000 on a housing basis.
5	**Replacement with 100 Line-compatible Type** Describes replacing the 100 line with the YS1000.

Symbols Used in This Manual

This symbol is used on the instrument. It indicates the possibility of injury to the user or damage to the instrument, and signifies that the user must refer to the user's manual for special instructions. The same symbol is used in the user's manual on pages that the user needs to refer to, together with the term "WARNING" or "CAUTION."

WARNING

Calls attention to actions or conditions that could cause serious or fatal injury to the user, and indicates precautions that should be taken to prevent such occurrences.

CAUTION

Calls attention to actions or conditions that could cause injury to the user or damage to the instrument or property and indicates precautions that should be taken to prevent such occurrences.

Note

Identifies important information required to operate the instrument.

▶

Indicates related operations or explanations for the user's reference.

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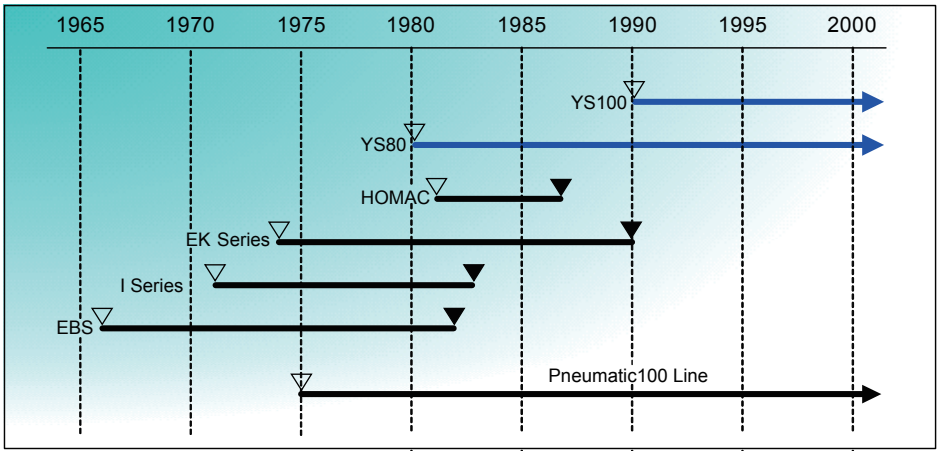
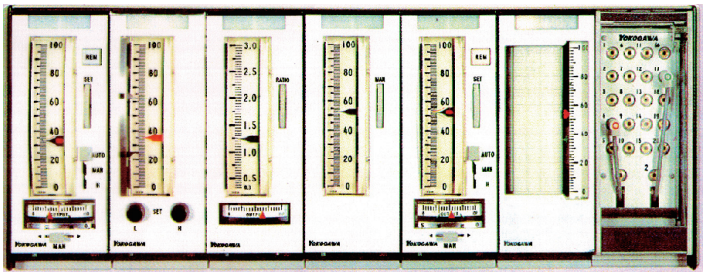
Revision Information

1.1 Overview

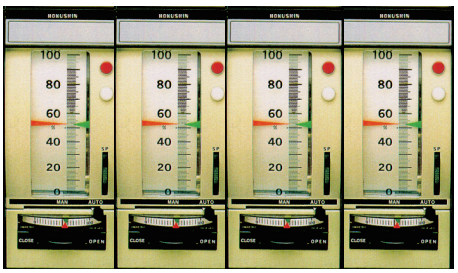
This chapter specifies the external dimensions, panel cutout, terminal layout of the compatible types for replacing the earlier single-loop controller models (EBS, I, EK, and HOMAC), 100 line, YS80, and the YS100 series with the YS1000 and describes how to mount and remove the YS1000. For operations of the YS1000, read through each YS1000 series manual.



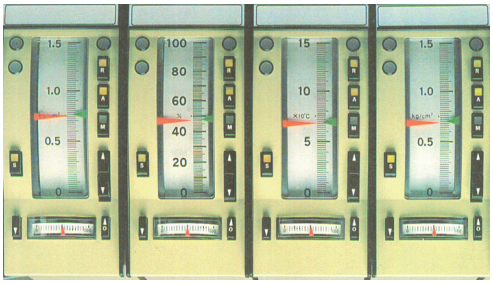
EBS



I Series



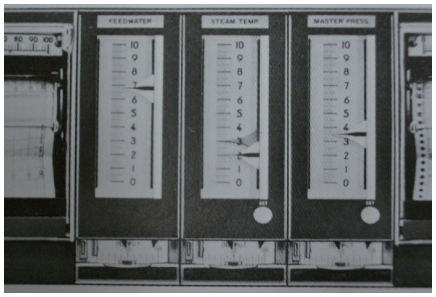
EK



HOMAC

YS80

YS100



100 Line

1.2 Models and Suffix Codes

Model	Suffix Code	Optional Code	Remarks
YS1700			Programmable indicating controller
YS1500			Indicating controller
YS1360			Manual Setter for MV Setting
YS1350			Manual Setter for SV Setting
YS1310			Indicator with Alarm
	-0		Always “0”
Type	0		Basic type
	1		Basic type with expandable I/O (*1)
	2		Compatible type for YS100 (with YS100 case)
	3		Compatible type for YS80 internal unit/compatible type for EBS, I, EK, and HOMAC (*2)
	4		Compatible type for YS80 (compatible size for YS80 with YS100 terminal)
	5		Compatible type for pneumatic 100 line (with YS100 terminal) (*3)
Power supply	0		100 V AC, 24 V DC common power
	1		220 V AC power
Direct input (*4)		/A01	mV input
		/A02	Thermocouple input
		/A03	RTD input
		/A04	Potentiometer input
		/A05	Isolator
		/A06	Two-wire transmitter input (isolated)
		/A07	Two-wire transmitter input (non-isolated)
		/A08	Frequency input
		/DF	Direct input with Fahrenheit temperature range function (*5)
Communication		/A31	RS-485 communication (PC-link, Modbus, YS protocol, and Peer-to-Peer) (*6)
		/A32	DCS-LCS communication (*7)
		/A34	Ethernet communication (Modbus/TCP) (*8)
Standards		/FM	FM nonincendive approved (FM Class I, Div 2) (*9)
Hard manual unit		/NHM	Hard manual unit not included (If optional code /NHM is not specified, the product includes a hard manual unit.) (*10)

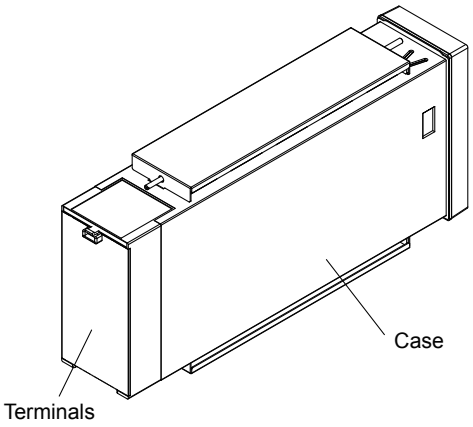
*1 Only YS1700 is compatible. The expandable I/O terminal (model YS010) and expandable I/O cable (model YS011) (cable length: 3 m) are provided.
*2 This type can be connected to the YS80 housing (model SHUP-000). (The EK/HOMAC-compatible housing (SHUP-420) and EBS/I series-compatible housing (SHUP-100) are sold separately.)
*3 The 100 line-compatible housing (model YS006) is sold separately.
*4 Direct input options can be combined only with suffix codes “-02☐,” “-04☐,” or “-05☐.” Selection of multiple options is not possible.
*5 Optional code /DF can be combined only with optional code /A02 or /A03.
*6 A combination with suffix code “-03☐” is not possible. Optional codes /A31 and /A32 cannot be simultaneously specified.
*7 YS1310 cannot be specified. Optional codes /A31 and /A32 cannot be simultaneously specified.
*8 Optional code /A34 can be specified only for suffix codes “-00☐” or “-01☐.”
*9 Optional code /FM can be combined only with suffix codes “-00☐” or “-01☐.”
*10 The hard manual unit option can only be specified for YS1700, YS1500 and YS1360. If this option is not specified, the product includes a hard manual unit.

1.3 Explanation of Terms and Replacement-related Descriptions

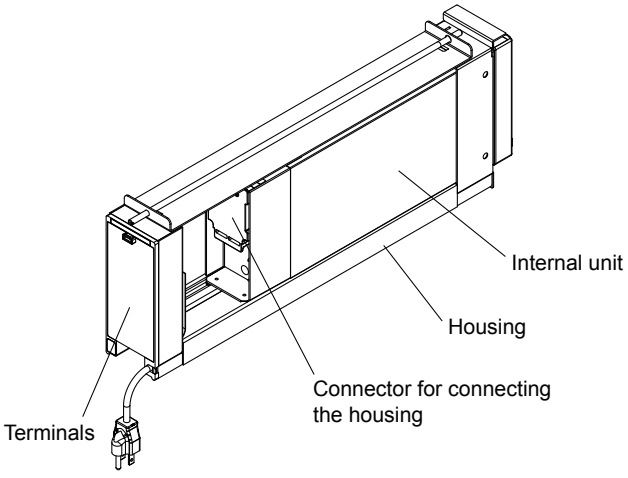
Housings

(1) For the YS80, the enclosure containing the internal unit is called a “housing.”
(2) For the YS100 and the YS1000, it is regarded as a product with its internal unit installed in an enclosure. This enclosure is not called “housing,” but is called a “case.”
(3) The types of housings also vary depending on the types of existing controllers to be replaced.
(4) For the YS80, housing is required.
(5) For the YS1000, housings are used to re-use panel cutout and existing wiring the same as when replacing the existing controllers. No housing is required if it is not necessary to consider the panel cutout of an existing controller, etc. or for new mounting.

Compatible Type for YS100 (YS1□□0-02□)



Compatible Type for YS80 Internal Unit (YS1□□0-03□)



Mounting Kits:

Components used to prevent the instrument from being horizontally shaken or used for ornamenting panel cutout opening when mounting into a housing.

2.1 Replacement with YS100-compatible Type

Replace the YS100 with the YS1000. The model and suffix code are YS1□□0-02□.
Replace the existing YS100 series and its case with the YS1000.

2.2 Panel Mounting Method

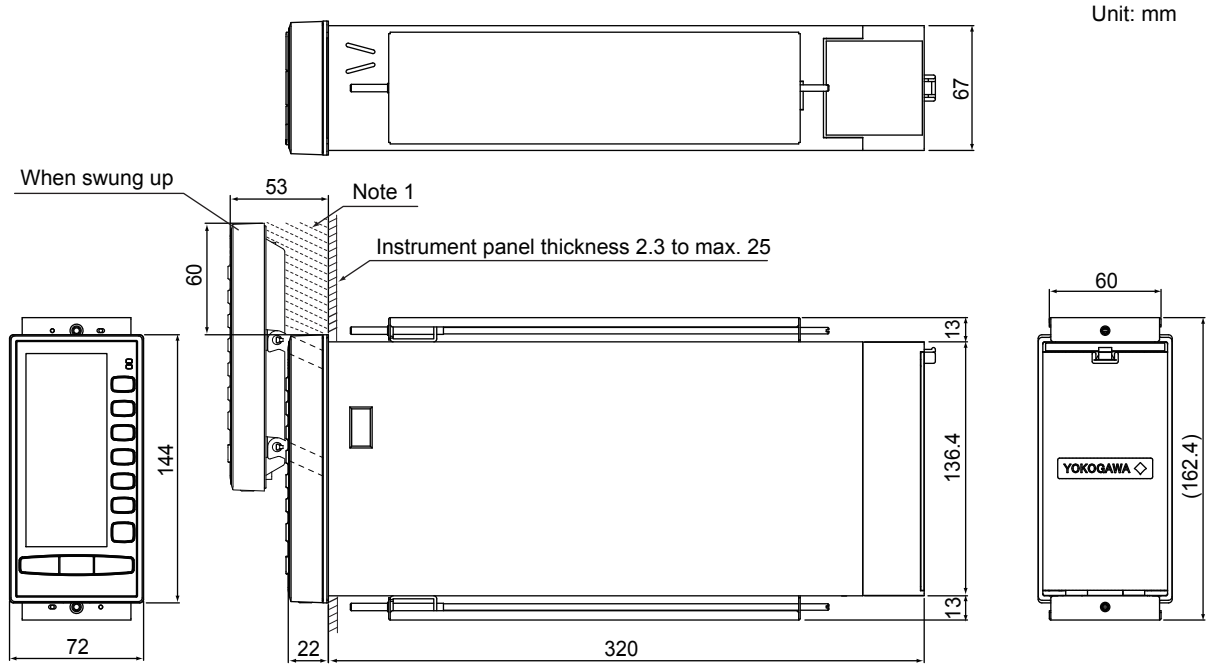
Follow the same procedure for the YS1000 (suffix code "-00□", basic type).

▶ Mounting and Removing: "Mounting the Instrument Main unit" of "Mounting Method" of "Installation and Wiring" in each YS1000 Operation Guide.

2.3 YS1□□0-02□ External Dimensions

2.3.1 External Dimensions

Unit: mm

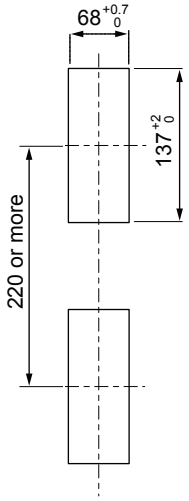


Weight: 2.4 kg

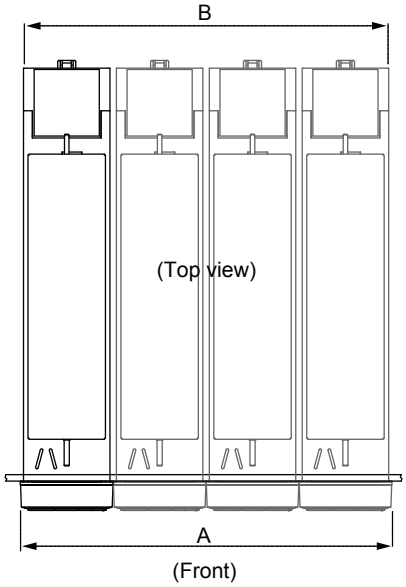
Note 1: If a nameplate, etc. is installed within 60 mm above the instrument, the thickness of the nameplate, etc. must be 30 mm or less from the panel surface.
Note 2: To ensure good air ventilation, allow space of 100 mm or more at the top and bottom of the panel.
Note 3: General tolerance = ± (value of tolerance class IT18 based on JIS B 0401-1998) / 2

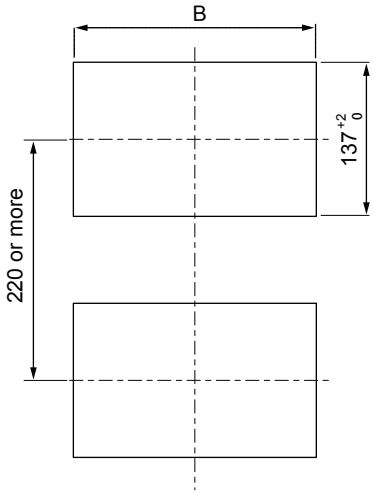
2.3.2 Panel Cutout Dimensions

For Single Mounting



For Side-by-side Mounting

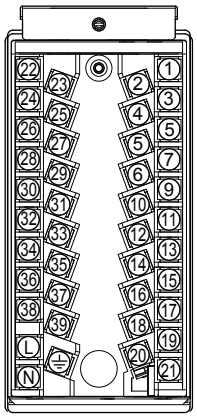




Number of Units / Location	1	2	3	4	5	6	7
A	72	144	216	288	360	432	504
B	$68^{+1.0}_{0}$	$140^{+1.0}_{0}$	$212^{+1.0}_{0}$	$284^{+1.0}_{0}$	$356^{+1.0}_{0}$	$428^{+1.0}_{0}$	$500^{+1.0}_{0}$

Number of Units / Location	8	9	10	11	12	13	14
A	576	648	720	792	864	936	1008
B	$572^{+1.0}_{0}$	$644^{+1.0}_{0}$	$716^{+1.0}_{0}$	$788^{+1.0}_{0}$	$860^{+1.0}_{0}$	$932^{+1.0}_{0}$	$1004^{+1.0}_{0}$

2.4 Terminals Layout



2.5 Terminal Arrangement Table

(1) YS1500/YS1700

Terminal number	Programmable mode (YS1700 only)	Single-loop mode	Cascade mode	Selector mode	User settings ( ) mode (Note 10)
1 2	+ – Analog input 1 (1-5V DC)	+ – Measurement input (1-5V DC)	+ – Measurement input 1 (1-5V DC)	+ – Measurement input 1 (1-5V DC)	
3 4	+ – Analog input 2 (1-5V DC)	+ – Cascade setting input (1-5V DC)	+ – Cascade setting input (1-5V DC)	+ – Cascade setting input 1 (1-5V DC)	
5 6	+ – Analog input 3 (1-5V DC)	+ – Input value for output tracking (1-5V DC)	+ – Measurement input 2 (1-5V DC)	+ – Measurement input 2 (1-5V DC)	
7 8	+ – Analog input 4 (1-5V DC)	+ – Feedforward input (1-5V DC)	+ – Feedforward input (1-5V DC) (Note 1)	+ – Cascade setting input 2 (1-5V DC) (Note 1)	
9 10	+ – Analog input 5 (1-5V DC) (Note 2)	+ – Output of the direct input signal (1-5V DC)	+ – Output of the direct input signal (1-5V DC)	+ – Output of the direct input signal (1-5V DC)	
11 12	+ – FAIL output (Note 3)	+ – FAIL output (Note 3)	+ – FAIL output (Note 3)	+ – FAIL output (Note 3)	
13	Connection of transmitter supply power (24V DC) (Note 4)	Connection of transmitter supply power (24V DC) (Note 4)	Connection of transmitter supply power (24V DC) (Note 4)	Connection of transmitter supply power (24V DC) (Note 4)	
14	Communication terminal SG	Communication terminal SG	Communication terminal SG	Communication terminal SG	
15	Communication terminal SDA (–)	Communication terminal SDA (–)	Communication terminal SDA (–)	Communication terminal SDA (–)	
16	Communication terminal SDB (+)	Communication terminal SDB (+)	Communication terminal SDB (+)	Communication terminal SDB (+)	
17	Communication terminal RDA (–) or LCS (+)	Communication terminal RDA (–) or LCS (+)	Communication terminal RDA (–) or LCS (+)	Communication terminal RDA (–) or LCS (+)	
18	Communication terminal RDB (+) or LCS (–)	Communication terminal RDB (+) or LCS (–)	Communication terminal RDB (+) or LCS (–)	Communication terminal RDB (+) or LCS (–)	
19 20 21	+ – Direct input terminals (Note 5)	+ – Direct input terminals (Note 5)	+ – Direct input terminals (Note 5)	+ – Direct input terminals (Note 5)	
22 23	+ – Analog output 1 (4 to 20mA DC)	+ – Manipulated output variable 1 (4 to 20mA DC)	+ – Manipulated output variable 1 (4 to 20mA DC)	+ – Manipulated output variable 1 (4 to 20mA DC)	
24 25	+ – Analog output 2 (1-5V DC)	+ – Manipulated output variable 2 (1-5V DC) (Note 6)	+ – Manipulated output variable 2 (1-5V DC) (Note 6)	+ – Manipulated output variable 2 (1-5V DC) (Note 6)	
26 27	+ – Analog output 3 (4 to 20mA DC/1-5V DC) (Note 7)	+ – Setpoint value output (1-5V DC) (Note 6)	+ – Setpoint value output (1-5V DC) (Note 6)	+ – Setpoint value output (1-5V DC) (Note 6)	
28 29	+ – Digital output 1/Digital input 6 (Note 8)	+ – High limit alarm setpoint for PV output (Note 9)	+ – LOOP 1 alarm output (Note 9)	+ – LOOP 1 alarm output (Note 9)	
30 31	+ – Digital output 2/Digital input 5 (Note 8)	+ – Low limit alarm setpoint for PV output (Note 9)	+ – LOOP 2 alarm output (Note 9)	+ – LOOP 2 alarm output (Note 9)	
32 33	+ – Digital output 3/Digital input 4 (Note 8)	+ – Velocity alarm setpoint for PV output (Note 9)	+ – O/C status output (Note 9)	+ – L/R status output (Note 9)	
34 35	+ – Digital output 4/Digital input 3 (Note 8)	+ – C/A, M status output (Note 9)	+ – C/A, M status output (Note 9)	+ – C/A, M status output (Note 9)	
36 37	+ – Digital output 5/Digital input 2 (Note 8)	+ – C, A/M status output (Note 9)	+ – C, A/M status output (Note 9)	+ – C, A/M status output (Note 9)	
38 39	+ – Digital output 6/Digital input 1 (Note 8)	+ – No function (Factory default) (Note 9)	+ – No function (Factory default) (Note 9)	+ – No function (Factory default) (Note 9)	
L N ⏚	+ – Power supply Grounding terminal	+ – Power supply Grounding terminal	+ – Power supply Grounding terminal	+ – Power supply Grounding terminal	

Note

Do not use an unused terminal as a relaying terminal, etc.

Note 1: These terminals can be used as output tracking input if feedforward input or cascade setting input 2 is not used.
Note 2: For models with direct input (optional code /A0□), these terminals are treated as direct input signal output (1-5 V DC).
Note 3: Using the terminals as fail output requires an external power supply.
Note 4: For a transmitter power supply, see “Wiring” of “Installation and Wiring” in each YS1000 Operation Guide.
Note 5: For models with direct input (optional code /A0□), the direct input terminals (19, 20, and 21) are used as input terminals. Connect the terminals as specified in Table 2.1, Connecting Direct Input Terminals.
Note 6: For manipulated output variable 2 and setpoint output, the output types can be changed using the analog output-2 selection Y2S and analog output-3 selection Y3S engineering parameters.
Note 7: For analog output 3, the output type can be changed using the analog output-3 current/ voltage switching Y3TP engineering parameter.
Note 8: Using these terminals as digital output requires an external power supply. The function of digital inputs or digital outputs can be set using the YSS1000 Setting Software (sold separately).
Note 9: Using these terminals as digital output requires an external power supply. The settings in the table are the factory defaults. Digital inputs or digital outputs can be appropriately used by setting the DI/DO setting DIO16 to DIO61 engineering parameters. Functions can be set using the DI1F to DI6F and DO1F to DO6F engineering parameters.
Note 10: If you change a function using the parameter concerned, enter the setting in the relevant field in the User settings column.

(2) YS1310/YS1350/YS1360

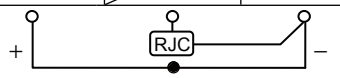
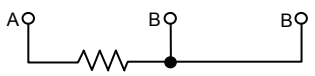
Terminal number	YS1310	YS1350	YS1360	User settings (Note 8)
1 2	+ / – Measurement input 1 (1-5V DC)	+ / – Measurement input 1 (1-5V DC)	+ / – Measurement input 1 (1-5V DC)	
3 4	+ / – Measurement input 2 (1-5V DC)	+ / – Cascade setting input (1-5V DC)	+ / – Cascade setting input (1-5V DC)	
5 6				
7 8				
9 10	+ / – Direct input signal output (1-5V DC) (Note 1)	+ / – Direct input signal output (1-5V DC) (Note 1)	+ / – Direct input signal output (1-5V DC) (Note 1)	
11 12	+ / – FAIL output (Note 2)	+ / – FAIL output (Note 2)	+ / – FAIL output (Note 2)	
13	Connection of transmitter supply power (24V DC) (Note 3)	Connection of transmitter supply power (24V DC) (Note 3)	Connection of transmitter supply power (24V DC) (Note 3)	
14 15 16 17 18	Communication terminal SG Communication terminal SDA (–) Communication terminal SDB (+) Communication terminal RDA (–) Communication terminal RDB (+)	Communication terminal SG Communication terminal SDA (–) Communication terminal SDB (+) Communication terminal RDA (–) or LCS (+) Communication terminal RDB (+) or LCS (–)	Communication terminal SG Communication terminal SDA (–) Communication terminal SDB (+) Communication terminal RDA (–) or LCS (+) Communication terminal RDB (+) or LCS (–)	
19 20 21	+ / – Direct input terminals (Note 4)	+ / – Direct input terminals (Note 4)	+ / – Direct input terminals (Note 4)	
22 23			+ / – Manipulated output variable 1 (4 to 20mA DC)	
24 25		+ / – Setpoint value output (1-5V DC)	+ / – Manipulated output variable 2 (1-5V DC)	
26 27				
28 29	+ / – High limit alarm output for PV 1 (Note 5)	+ / – High limit alarm output (Note 6)	+ / – High limit alarm output (Note 6)	
30 31	+ / – Low limit alarm output for PV 1 (Note 5)	+ / – Low limit alarm output (Note 6)	+ / – Low limit alarm output (Note 6)	
32 33	+ / – High-high limit alarm output for PV 1 (Note 5)			
34 35	+ / – Low-low limit alarm output for PV 1 (Note 5)	+ / – C/M status output (Note 6)	+ / – C/M status output (Note 6)	
36 37	+ / – OR output of high limit alarm output for PV 2 and low limit alarm output for PV 2 (Note 5)	+ / – No function (Factory default) (Note 7)	+ / – No function (Factory default) (Note 7)	
38 39	+ / – OR output of high-high limit alarm output for PV 2 and low-low limit alarm output for PV 2 (Note 5)	+ / – No function (Factory default) (Note 7)	+ / – No function (Factory default) (Note 7)	
L N ⏚	+ / – Power supply Grounding terminal	+ / – Power supply Grounding terminal	+ / – Power supply Grounding terminal	

Note

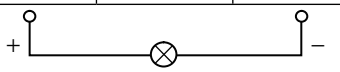
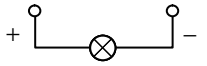
Do not use an unused terminal as a relaying terminal, etc.

Note 1: For models with direct input (optional code /A0□), these terminals are treated as direct input signal output (1-5 V DC).
Note 2: Using the terminals as fail output requires an external power supply.
Note 3: For a transmitter power supply, see “Wiring” of “Installation and Wiring” in each YS1000 Operation Guide.
Note 4: For models with direct input (optional code /A0□), the direct input terminals (19, 20, and 21) are used as input terminals. Connect the terminals as specified in Table 2.1, Connecting Direct Input Terminals.
Note 5: Using these terminals as digital output requires an external power supply. The settings in the table are the factory defaults. Digital inputs or digital outputs can be appropriately used by setting the DI/DO setting DIO16 engineering parameter. Functions can be set using the DI1F and DO1F to DO6F engineering parameters.
Note 6: Using these terminals as digital output requires an external power supply.
Note 7: The settings in the table are the factory defaults. Functions can be set using the DI1F and DI2F engineering parameters.
Note 8: If you change a function using the parameter concerned, enter the setting in the relevant field in the User settings column.

Table 2.1 Connecting Direct Input Terminals

<table>
<tr><td colspan="2" rowspan="2"></td><td colspan="3">Terminal Symbol</td></tr>
<tr><td>19</td><td>21</td><td>20</td></tr>
<tr><td colspan="2">mV input (optional code /A01)
Isolator (optional code /A05)</td><td>+</td><td></td><td>–</td></tr>
<tr><td colspan="2">Thermocouple input (optional code /A02)</td><td colspan="3"> 
</td></tr>
<tr><td colspan="2">RTD input (optional code /A03)</td><td colspan="3"> 

Match the wiring resistances of terminals 19 and 21 with each other.</td></tr>
<tr><td colspan="2">Potentiometer input (optional code /A04)</td><td colspan="3">

Match the wiring resistances of terminals 19 and 20 with each other.</td></tr>
<tr><td rowspan="3">Frequency input (optional code /A08)</td><td>Two-wire type (voltage, contact)</td><td>+</td><td></td><td>–</td></tr>
<tr><td>Power feed type, two-wired</td><td>Signal</td><td>Power supply</td><td></td></tr>
<tr><td>Power feed type, three-wired</td><td>+</td><td>Power supply</td><td>–</td></tr>
<tr><td rowspan="2">Two-wire transmitter input (optional codes /A06, /A07)</td><td>Supply voltage required</td><td colspan="3"> 
</td></tr>
<tr><td>Case of 4 to 20 mA signal not requiring power supply</td><td colspan="3"> 
</td></tr>
</table>

Note

Compatible type for YS100: YS1□□0-02□/A02, an external RJC is connected. This is different from the existing YS100s.
Connect the provided RJC to terminals 20 and 21. (Mount the RJC at the terminal 21 side.)

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3.1 Replacement with YS80 Internal Unit-compatible Type and EBS, I, EK, or HOMAC-compatible Type

Replace the YS80 internal unit or EBS, I, EK, or HOMAC controller with the YS1000. The model and suffix codes are YS1□□0-03□.
Install the YS1000 in an SHUP housing and then replace the internal unit or controller with the YS1000. For replacement of the EBS, I, EK, or HOMAC controller, the separately sold SHUP housing corresponding to the model is required.

Model to be Replaced	Corresponding Housing
YS80	SHUP-000*A
EBS or I series	SHUP-100*A
EK or HOMAC	SHUP-420*A

Note

The YS1□□0-031 of 220V AC power supply cannot be used with the SHUP housing of 100V power supply.

3.2 Panel Mounting Method

Follow the same procedure as for the YS80.
If the YS1000 is installed at an end in single mounting or side-by-side mounting, the separately sold mounting kit (MTS for the YS80, EBS, or I series/RA001 for the EK or HOMAC) is required.

► Mounting: Installation Manual for Panel-mounted Instruments (IM 1B4F1-01E)

3.3 Housing Mounting Method

3.3.1 Mounting to a Housing

1. Connect the housing's cable connector to the connector at the back of the YS1000.
2. Insert the YS1000 into the mounting kit by moving it along the housing frame until you hear a click, which means the case is now fitted into and fastened to the housing.

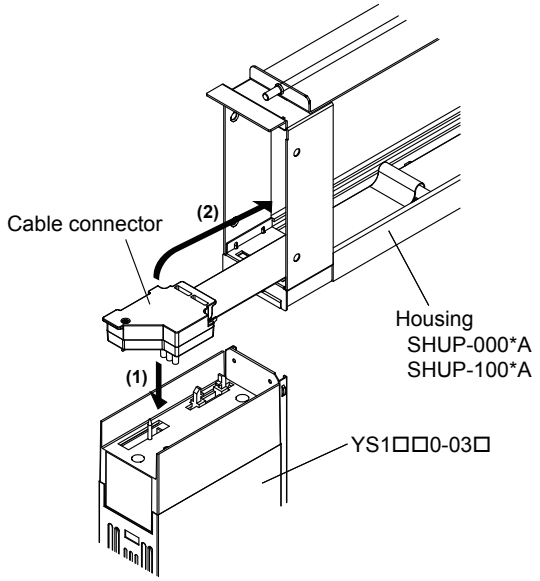


Figure 3.1 Connecting the Connector of SHUP-000*A (YS80 Housing) and SHUP-100*A (EBS or I Series-compatible Housing)

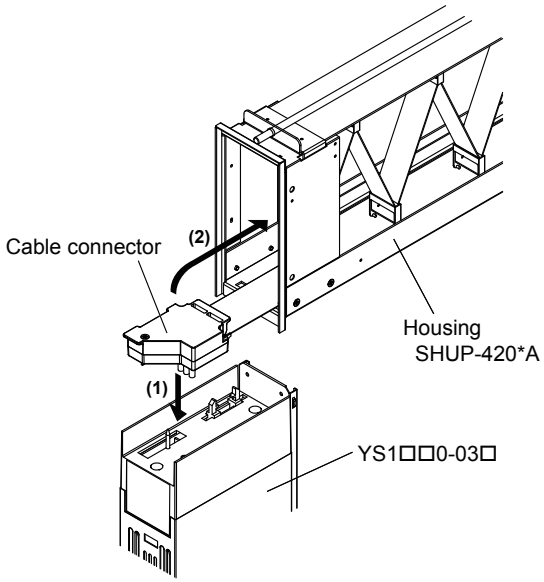


Figure 3.2 Connecting the Connector of SHUP-420*A (EK or HOMAC-compatible Housing)

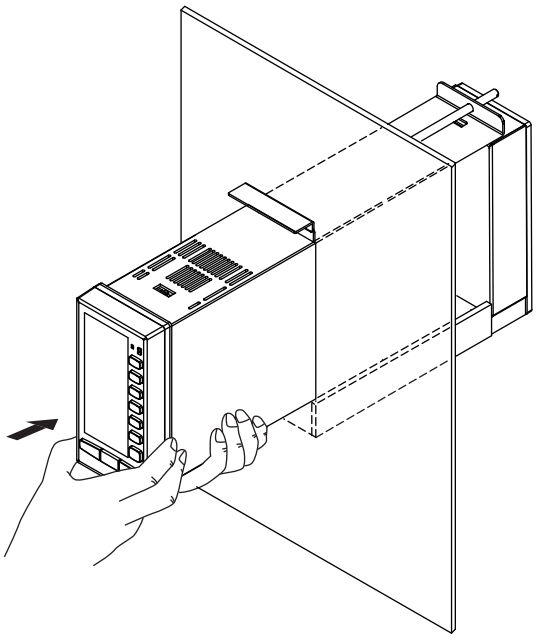


Figure 3.3 Inserting YS1000 into a Housing

3.3.2 Removing the YS1000

Prepare a flat-blade screwdriver (with an end size of 7 mm or less).

1. Insert the screwdriver into the clearance at the lower part of the stopper key. This causes the stopper key to be lifted up.
2. With the screwdriver inserted, pull out the YS1000 from the housing.
3. Disconnect the cable connector of the housing from the connector at the back of the YS1000.

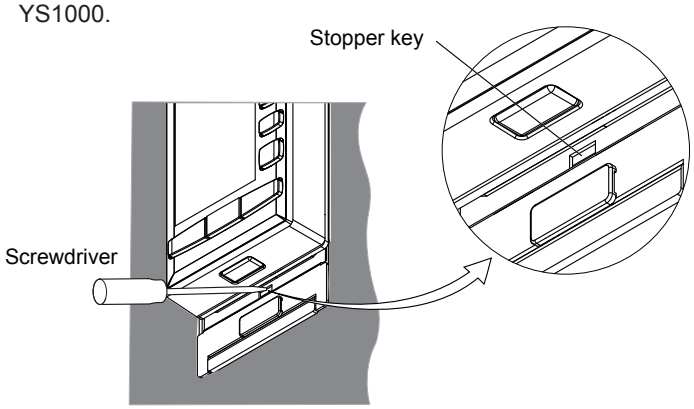


Figure 3.4 Inserting Screwdriver into Clearance

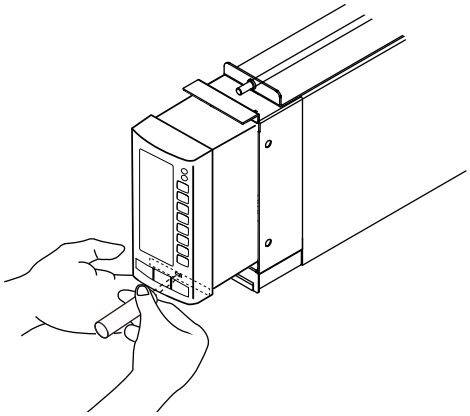
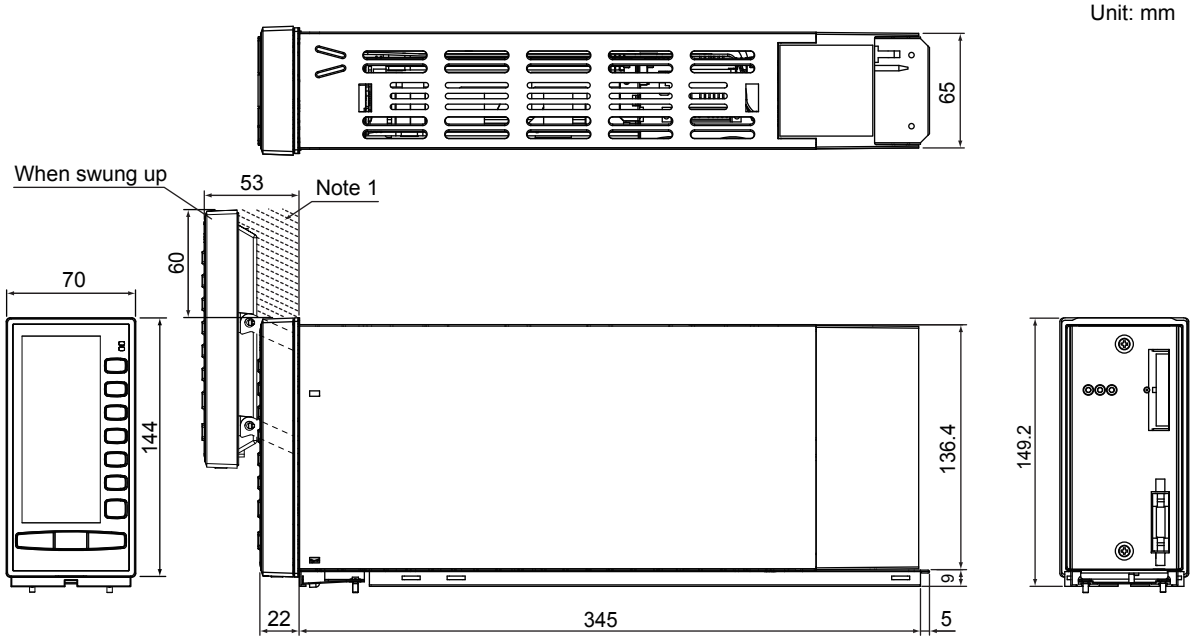


Figure 3.5 Pulling YS1000 out of the Housing

3.4 YS1□□0-03□ External Dimensions

Unit: mm



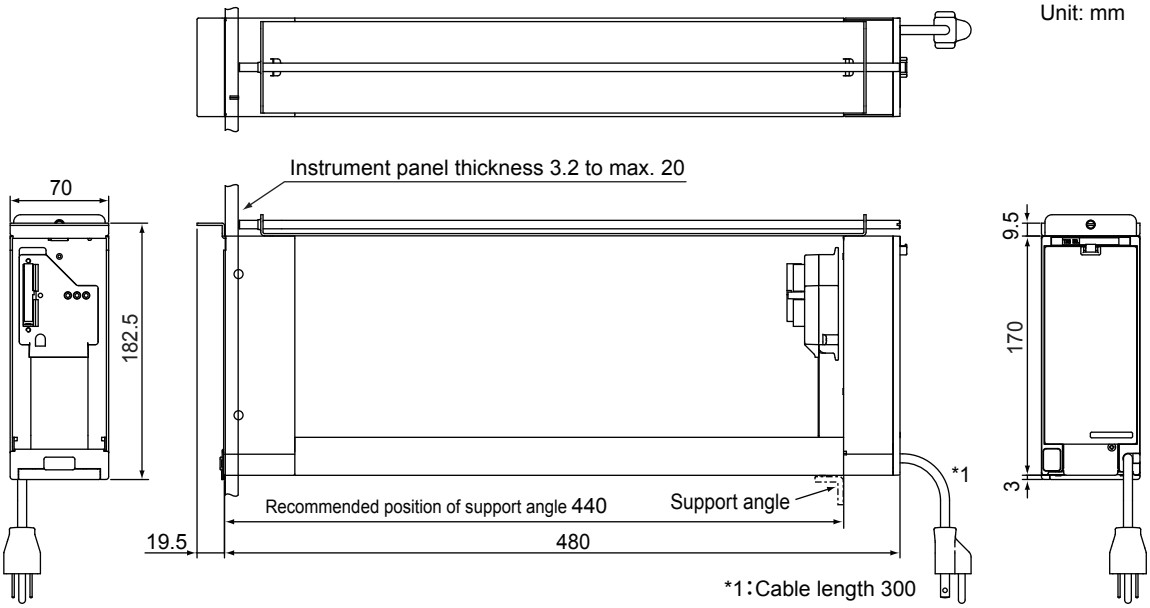
Weight: 2.5 kg

Note 1: If a nameplate, etc. is installed within 60 mm above the instrument, the thickness of the nameplate, etc. must be 30 mm or less from the panel surface.
Note 2: To ensure good air ventilation, allow space of 100 mm or more at the top and bottom of the panel.
Note 3: General tolerance = ± (value of tolerance class IT18 based on JIS B 0401-1998) / 2

3.5 External Dimensions and Terminals Layout of Housings

3.5.1 SHUP-000*A (YS80 Housing), SHUP-000*A/A2ER (YS80 Housing, 220V Version Plug)

Unit: mm

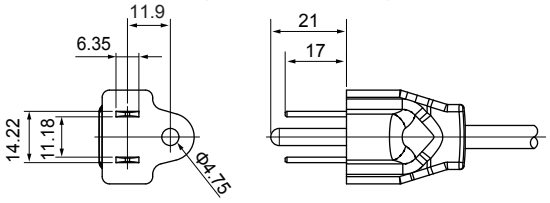


Front view

Weight: 2.0 kg (excluding mounting kit)

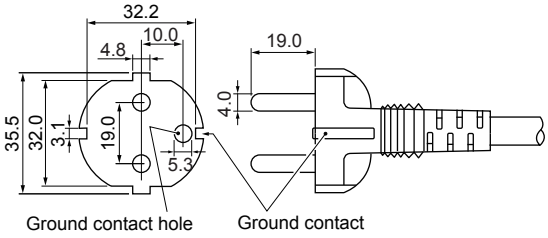
Rear view

Outline Drawing of 100V Version Plug



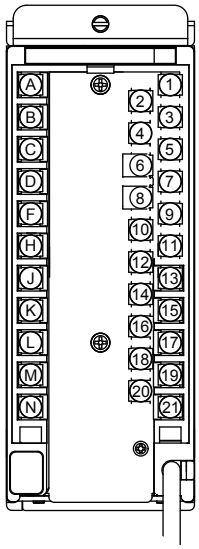
JIS C 8303 15A, 125 V Grounding Type Two-prong Attachment Plug

Outline Drawing of 220V Version Plug (Optional Code: /A2ER)



CEE PUBLICATION 7 STANDARD SHEET VII
10/16A 250V TWO-POLE PLUG WITH DUAL-EARTHING CONTACTS

Terminals Layout

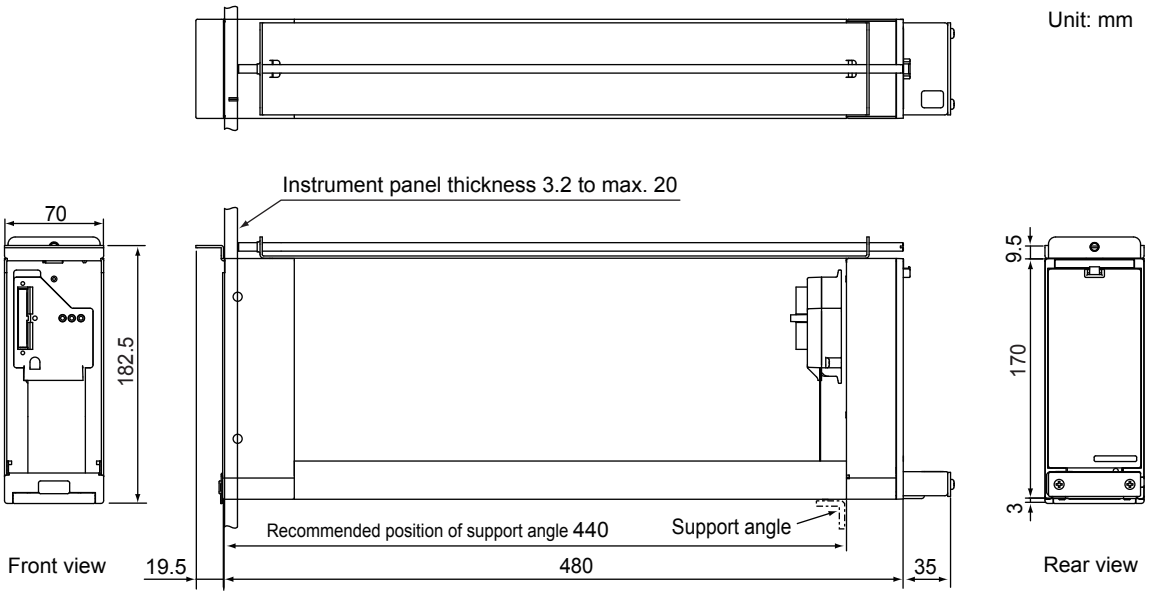


Note

SHUP-000*A (YS80 Housing) is sold separately.

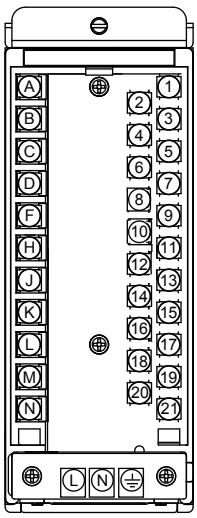
3.5.2 SHUP-000*A/HTB (YS80 Housing, Power Terminal Type)

Unit: mm



Weight: 2.0 kg (excluding mounting kit)

Terminals Layout



Terminal Symbol	Remarks
L	+
N	– Power supply (DC or AC)
⏚	Grounding

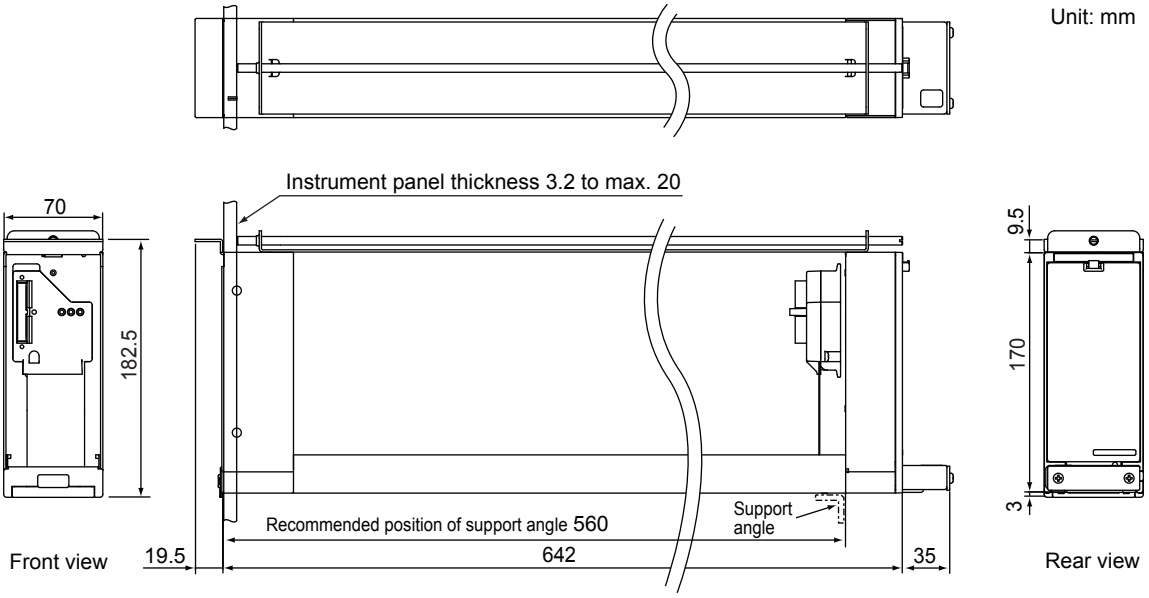
Note: Be aware that the signal terminals also have L and N terminals.

Note

SHUP-000*A/HTB (YS80 Housing Power Terminal Type) is sold separately.

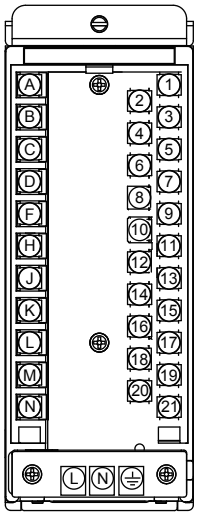
3.5.3 SHUP-100*A (EBS or I Series-compatible Housing)

Unit: mm



Weight: 3.0 kg (excluding mounting kit)

Terminals Layout



Terminal Symbol	Remarks
L	+
N	− Power supply (DC or AC)
⏚	Grounding

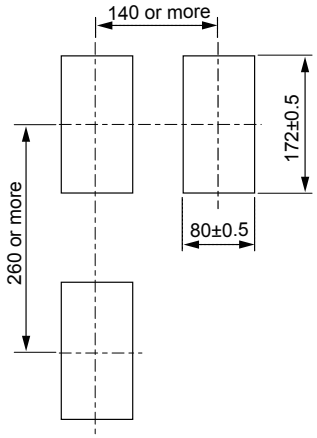
Note: Be aware that the signal terminals also have L and N terminals.

Note

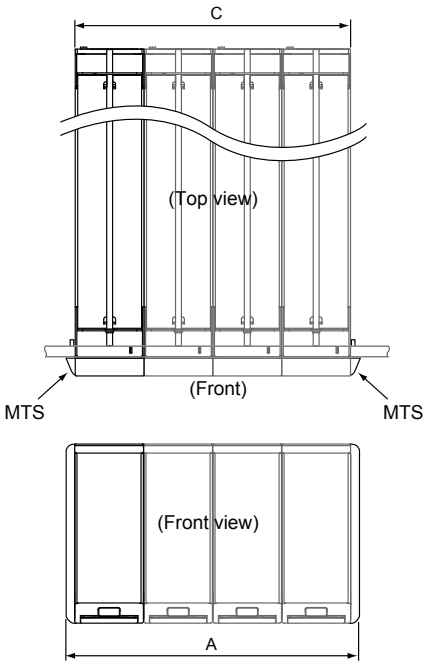
SHUP-100*A (EBS or I Series-compatible Housing) is sold separately.

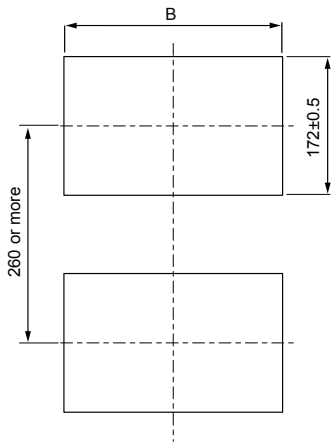
3.5.4 Panel Cutout Dimensions (SHUP-000*A, SHUP-000*A/A2ER, SHUP-000*A/HTB, SHUP-100*A)

For Single Mounting



For Side-by-side Mounting





Number of Units / Location	1	2	3	4	5	6	7	8
A*	87	159	229	300	370	442	512	583
B	$80^{\pm0.5}$	$150^{\pm0.5}$	220^{+1}_{0}	291^{+1}_{0}	$361^{+1.5}_{0}$	$433^{+1.5}_{0}$	$503^{+1.5}_{0}$	$574^{+1.5}_{0}$
C	70	140	210	280	350	420	490	560

Number of Units / Location	9	10	11	12	13	14	15
A*	653	723	794	864	935	1005	1075
B	$644^{+1.5}_{0}$	$714^{+1.5}_{0}$	$785^{+1.5}_{0}$	$855^{+1.5}_{0}$	$926^{+1.5}_{0}$	$996^{+1.5}_{0}$	1066^{+2}_{0}
C	630	700	770	840	910	980	1050

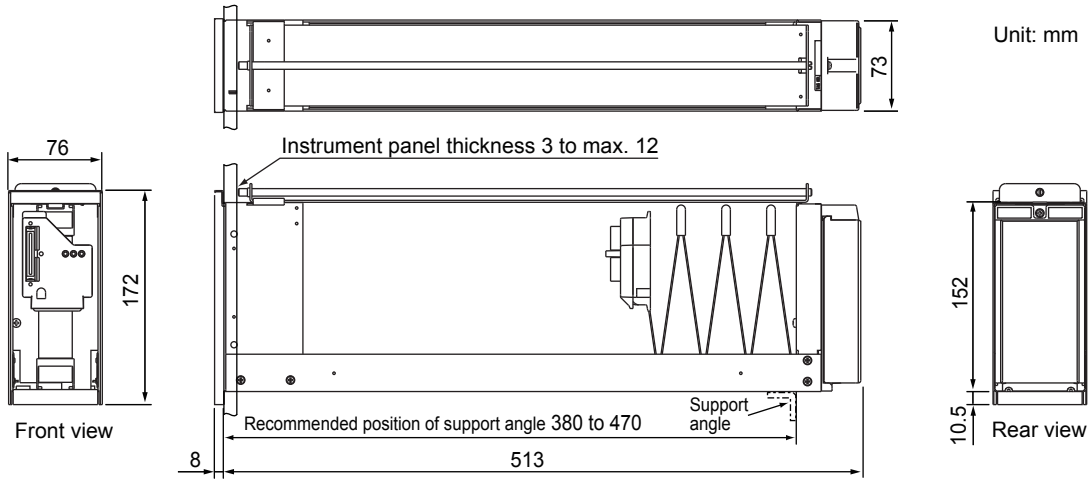
*: The numerical values in line A include the MTS's bezels.

Note

If the YS1000 is mounted at an end in single mounting or side-by-side mounting, attach the separately sold mounting kit (MTS) to the housing.

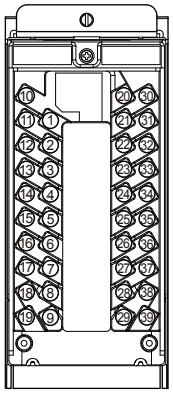
3.5.5 SHUP-420*A (EK or HOMAC-compatible Housing)

Unit: mm



Weight: 2.4 kg (excluding mounting kit)

Terminals Layout

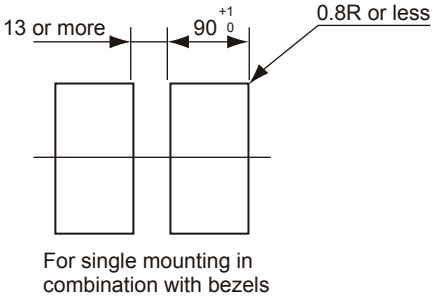


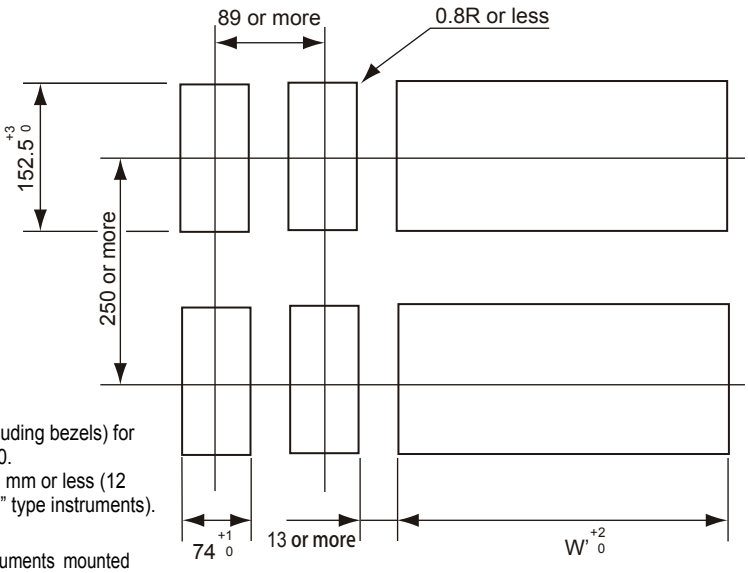
Screws: M3.5

Note

SHUP-420*A (EK or HOMAC-compatible Housing) is sold separately.

3.5.6 Panel Cutout Dimensions (SHUP-420*A)





W' = W – 7 mm "W" shows the front panel width (including bezels) for side-by-side mounting of the YS1000.
Note that dimension W is 16 + 919.2 mm or less (12 units or less as the number of "3 × 6" type instruments).

W = (76.6 × N) + (152.4 + M) + 23
where N: Number of "3 × 6" type instruments mounted
M: Number of "6 × 6" type instruments mounted

Note

If the YS1000 is mounted at an end in single mounting or side-by-side mounting, attach the separately sold mounting kit (RA001) to the housing.

3.6 Terminal Arrangement Table

3.6.1 SHUP-000*A (YS80 Housing), SHUP-000*A/A2ER (YS80 Housing, 220V Version Plug), SHUP-000*A/HTB (YS80 Housing, Power Terminal Type), SHUP-100*A (EBS or I Series-compatible Housing)

(1) YS1500/YS1700

Terminal number	Programmable mode (YS1700 only)	Single-loop mode	Cascade mode	Selector mode	User settings ( ) mode (Note 8)
1 2	+ Analog input 1 – (1-5V DC)	+ Measurement input – (1-5V DC)	+ Measurement input 1 – (1-5V DC)	+ Measurement input 1 – (1-5V DC)	
3 4	+ Analog input 2 – (1-5V DC)	+ Cascade setting input – (1-5V DC)	+ Cascade setting input – (1-5V DC)	+ Cascade setting input 1 – (1-5V DC)	
5 6	+ Analog input 3 – (1-5V DC)	+ Input value for output – tracking (1-5V DC)	+ Measurement input 2 – (1-5V DC)	+ Measurement input 2 – (1-5V DC)	
7 8	+ Analog input 4 – (1-5V DC)	+ Feedforward input – (1-5V DC)	+ Feedforward input – (1-5V DC) (Note 2)	+ Cascade setting inpu 2 – (1-5V DC) (Note 2)	
9 10	+ Analog input 5 – (1-5V DC)	+ Output of the direct input – signal (1-5V DC)	+ Output of the direct input – signal (1-5V DC)	+ Output of the direct input – signal (1-5V DC)	
N 21	+ FAIL output (Note 3) –	+ FAIL output (Note 3) –	+ FAIL output (Note 3) –	+ FAIL output (Note 3) –	
	Connection of transmitter supply power (24V DC)	Connection of transmitter supply power (24V DC)	Connection of transmitter supply power (24V DC)	Connection of transmitter supply power (24V DC)	
17 18	Communication terminal SG Communication terminal SDA (–) Communication terminal SDB (+) Communication terminal RDA (–) or LCS (+) Communication terminal RDB (+) or LCS (–)	Communication terminal SG Communication terminal SDA (–) Communication terminal SDB (+) Communication terminal RDA (–) or LCS (+) Communication terminal RDB (+) or LCS (–)	Communication terminal SG Communication terminal SDA (–) Communication terminal SDB (+) Communication terminal RDA (–) or LCS (+) Communication terminal RDB (+) or LCS (–)	Communication terminal SG Communication terminal SDA (–) Communication terminal SDB (+) Communication terminal RDA (–) or LCS (+) Communication terminal RDB (+) or LCS (–)	
	+ – Direct input terminals	+ – Direct input terminals	+ – Direct input terminals	+ – Direct input terminals	
A B	+ Analog output 1 – (4 to 20mA DC)	+ Manipulated output variable 1 – (4 to 20mA DC)	+ Manipulated output variable 1 – (4 to 20mA DC)	+ Manipulated output variable 1 – (4 to 20mA DC)	
C D	+ Analog output 2 – (1-5V DC)	+ Manipulated output variable 2 – (1-5V DC) (Note 4)	+ Manipulated output variable 2 – (1-5V DC) (Note 4)	+ Manipulated output variable 2 – (1-5V DC) (Note 4)	
F H	+ Analog output 3 – (4 to 20mA DC/1-5V DC) (Note 5)	+ Setpoint value output – (1-5V DC) (Note 4)	+ Setpoint value output – (1-5V DC) (Note 4)	+ Setpoint value output – (1-5V DC) (Note 4)	
J K	+ Digital output 1/Digital – input 6 (Note 6)	+ High limit alarm setpoint – for PV output (Note 7)	+ LOOP 1 alarm output – (Note 7)	+ LOOP 1 alarm output – (Note 7)	
L M	+ Digital output 2/Digital – input 5 (Note 6)	+ Low limit alarm setpoint – for PV output (Note 7)	+ LOOP 2 alarm output – (Note 7)	+ LOOP 2 alarm output – (Note 7)	
19 20	+ Digital output 3/Digital – input 4 (Note 6)	+ Velocity alarm setpoint for – PV output (Note 7)	+ O/C status output – (Note 7)	+ L/R status output – (Note 7)	
15 16	+ Digital output 4/Digital – input 3 (Note 6)	+ C/A, M status output – (Note 7)	+ C/A, M status output – (Note 7)	+ C/A, M status output – (Note 7)	
13 14	+ Digital output 5/Digital – input 2 (Note 6)	+ C, A/M status output – (Note 7)	+ C, A/M status output – (Note 7)	+ C, A/M status output – (Note 7)	
11 12	+ Digital output 6/Digital – input 1 (Note 6)	+ No function (Factory – default) (Note 7)	+ No function (Factory – default) (Note 7)	+ No function (Factory – default) (Note 7)	

Note

Do not use an unused terminal as a relaying terminal, etc.

Note 1: The functions in the shaded areas or those described in shaded characters are not available in the YS80 housing or EBS or I series-compatible housing.
Note 2: These terminals can be used as output tracking input if feedforward input or cascade setting input 2 is not used.
Note 3: Using the terminals as fail output requires an external power supply.
Note 4: For manipulated output variable 2 and setpoint output, the output types can be changed using the analog output-2 selection Y2S and analog output-3 selection Y3S engineering parameters.
Note 5: For analog output 3, the output type can be changed using the analog output-3 current/ voltage switching Y3TP engineering parameter.
Note 6: Using these terminals as digital output requires an external power supply. The function of digital inputs or digital outputs can be set using the YSS1000 Setting Software (sold separately).
Note 7: Using these terminals as digital output requires an external power supply. The settings in the table are the factory defaults. Digital inputs or digital outputs can be appropriately used by setting the DI/DO setting DIO16 to DIO61 engineering parameters. Functions can be set using the DI1F to DI6F and DO1F to DO6F engineering parameters.
Note 8: If you change a function using the parameter concerned, enter the setting in the relevant field in the User settings column.

(2) YS1310/YS1350/YS1360

Terminal number	YS1310	YS1350	YS1360	User settings (Note 6)
1 2	+ / – Measurement input (1-5V DC)	+ / – Measurement input 1 (1-5V DC)	+ / – Measurement input 1 (1-5V DC)	
3 4	+ / – Measurement input 2 (1-5V DC)	+ / – Cascade setting input (1-5V DC)	+ / – Cascade setting input (1-5V DC)	
5 6				
7 8				
9 10	+ / – Output of the direct input signal (1-5V DC)	+ / – Output of the direct input signal (1-5V DC)	+ / – Output of the direct input signal (1-5V DC)	
N 21	+ / – FAIL output (Note 2)	+ / – FAIL output (Note 2)	+ / – FAIL output (Note 2)	
	Connection of transmitter supply power (24V DC)	Connection of transmitter supply power (24V DC)	Connection of transmitter supply power (24V DC)	
	Communication terminal SG Communication terminal SDA (–) Communication terminal SDB (+)	Communication terminal SG Communication terminal SDA (–) Communication terminal SDB (+)	Communication terminal SG Communication terminal SDA (–) Communication terminal SDB (+)	
17 18	Communication terminal RDA (–) or LCS (+) Communication terminal RDB (+) or LCS (–)	Communication terminal RDA (–) or LCS (+) Communication terminal RDB (+) or LCS (–)	Communication terminal RDA (–) or LCS (+) Communication terminal RDB (+) or LCS (–)	
	+ – Direct input terminals	+ – Direct input terminals	+ – Direct input terminals	
A B			+ / – Manipulated output variable 1 (4 to 20mA DC)	
C D		+ / – Setpoint value output (1-5V DC)	+ / – Manipulated output variable 2 (1-5V DC)	
F H				
J K	+ / – High limit alarm setpoint for PV 1 output (Note 3)	+ / – High limit alarm output (Note 4)	+ / – High limit alarm output (Note 4)	
L M	+ / – Low limit alarm setpoint for PV 1 output (Note 3)	+ / – Low limit alarm output (Note 4)	+ / – Low limit alarm output (Note 4)	
19 20	+ / – High-high limit alarm output for PV 1 (Note 3)			
15 16	+ / – Low-low limit alarm output for PV 1 (Note 3)	+ / – C/M status output (Note 4)	+ / – C/M status output (Note 4)	
13 14	+ / – OR output of high limit alarm output for PV 2 and low limit alarm output for PV 2 (Note 3)	+ / – No function (Factory default) (Note 5)	+ / – No function (Factory default) (Note 5)	
11 12	+ / – OR output of high-high limit alarm output for PV 2 and low-low limit alarm output for PV 2 (Note 3)	+ / – No function (Factory default) (Note 5)	+ / – No function (Factory default) (Note 5)	

Note 1: The functions in the shaded areas or those described in shaded characters are not available in the YS80 housing or EBS or I series-compatible housing.
Note 2: Using the terminals as fail output requires an external power supply.
Note 3: Using these terminals as digital output requires an external power supply. The settings in the table are the factory defaults. Digital inputs or digital outputs can be appropriately used by setting the DI/DO setting DIO16 engineering parameter. Functions can be set using the DI1F and DO1F to DO6F engineering parameters.
Note 4: Using these terminals as digital output requires an external power supply.
Note 5: The settings in the table are the factory defaults. Functions can be set using the DI1F and DI2F engineering parameters.
Note 6: If you change a function using the parameter concerned, enter the setting in the relevant field in the User settings column.

Note

Do not use an unused terminal as a relaying terminal, etc.

3.6.2 SHUP-420*A (EK or HOMAC-compatible Housing)

(1) YS1500/YS1700

Terminal number	Programmable mode (YS1700 only)	Single-loop mode	Cascade mode	Selector mode	User settings ( ) mode (Note 9)
1 2	+ Analog input 2 – (1-5V DC)	+ Cascade setting input – (1-5V DC)	+ Cascade setting input – (1-5V DC)	+ Cascade setting input 1 – (1-5V DC)	
3 4	+ Analog input 3 – (1-5V DC)	+ Input value for output tracking (1-5V DC) –	+ Measurement input 2 – (1-5V DC)	+ Measurement input 2 – (1-5V DC)	
5 6	+ Analog input 1 – (1-5V DC)	+ Measurement input – (1-5V DC)	+ Measurement input 1 – (1-5V DC)	+ Measurement input 1 – (1-5V DC)	
7 8	+ Analog output 1 – (4 to 20mA DC) (Note 2)	+ Manipulated output variable 1 – (4 to 20mA DC)	+ Manipulated output variable 1 – (4 to 20mA DC)	+ Manipulated output variable 1 – (4 to 20mA DC)	
9 10					
11 12	+ Digital output 1/Digital input 6 (Note 3) –	+ High limit alarm setpoint for PV output –	+ LOOP 1 alarm output –	+ LOOP 1 alarm output –	
13 14	+ Digital output 2/Digital input 5 (Note 3) –	+ Low limit alarm setpoint for PV output –	+ LOOP 2 alarm output –	+ LOOP 2 alarm output –	
15 16	+ Analog output 2 – (1-5V DC)	+ Manipulated output variable 2 – (1-5V DC) (Note 4)	+ Manipulated output variable 2 – (1-5V DC) (Note 4)	+ Manipulated output variable 2 – (1-5V DC) (Note 4)	
17 18	+ Analog output 3 – (4 to 20mA DC/1-5V DC) (Note 5)	+ Setpoint value output – (1-5V DC)	+ Setpoint value output – (1-5V DC) (Note 4)	+ Setpoint value output – (1-5V DC) (Note 4)	
19	Grounding terminal	Grounding terminal	Grounding terminal	Grounding terminal	
20 21	+ Digital output 6/Digital input 1 (Note 3) –	+ No function (Factory default) (Note 6) –	+ No function (Factory default) (Note 6) –	+ No function (Factory default) (Note 6) –	
22 23	+ Digital output 5/Digital input 2 (Note 3) –	+ C, A/M status output – (Note 6)	+ C, A/M status output – (Note 6)	+ C, A/M status output – (Note 6)	
24 25	+ Digital output 4/Digital input 3 (Note 3) –	+ C/A, M status output – (Note 6)	+ C/A, M status output – (Note 6)	+ C/A, M status output – (Note 6)	
26 27	+ Digital output 3/Digital input 4 (Note 3) –	+ Velocity alarm setpoint for PV output (Note 6) –	+ O/C status output – (Note 6)	+ L/R status output – (Note 6)	
28	– FAIL output (Note 7)	– FAIL output (Note 7)	– FAIL output (Note 7)	– FAIL output (Note 7)	
29	+ Power supply L1	+ Power supply L1	+ Power supply L1	+ Power supply L1	
30 31	+ Analog input 4 – (1-5V DC)	+ Feedforward input – (1-5V DC) (Note 8)	+ Feedforward input – (1-5V DC) (Note 8)	+ Cascade setting input 2 – (1-5V DC)	
32 33	+ Analog input 5 – (1-5V DC)	+ Output of the direct input signal (1-5V DC) –	+ Output of the direct input signal (1-5V DC) –	+ Output of the direct input signal (1-5V DC) –	
34	Connection of transmitter supply power (24V DC)	Connection of transmitter supply power (24V DC)	Connection of transmitter supply power (24V DC)	Connection of transmitter supply power (24V DC)	
35 36	Communication terminal SG Communication terminal SDA (–) Communication terminal SDB (+) Communication terminal RDA (–) or LCS (+) Communication terminal RDB (+) or LCS (–)	Communication terminal SG Communication terminal SDA (–) Communication terminal SDB (+) Communication terminal RDA (–) or LCS (+) Communication terminal RDB (+) or LCS (–)	Communication terminal SG Communication terminal SDA (–) Communication terminal SDB (+) Communication terminal RDA (–) or LCS (+) Communication terminal RDB (+) or LCS (–)	Communication terminal SG Communication terminal SDA (–) Communication terminal SDB (+) Communication terminal RDA (–) or LCS (+) Communication terminal RDB (+) or LCS (–)	
	+ – Direct input terminals	+ – Direct input terminals	+ – Direct input terminals	+ – Direct input terminals	
37					
38	+ FAIL output (Note 7)	+ FAIL output (Note 7)	+ FAIL output (Note 7)	+ FAIL output (Note 7)	
39	– Power supply L2	– Power supply L2	– Power supply L2	– Power supply L2	

Note

Do not use an unused terminal as a relaying terminal, etc.

Note 1: The functions in the shaded areas or those described in shaded characters are not available in the EK or HOMAC-compatible housings.
Note 2: If analog output 1 is not used, short-circuit these terminals.
Note 3: Using these terminals as digital output requires an external power supply.
The function of digital inputs or digital outputs can be set using the YSS1000 Setting Software (sold separately).
Note 4: For manipulated output variable 2 and setpoint output, the output types can be changed using the analog output-2 selection Y2S and analog output-3 selection Y3S engineering parameters.
Note 5: For analog output 3, the output type can be changed using the analog output-3 current/ voltage switching Y3TP engineering parameter.
Note 6: Using these terminals as digital output requires an external power supply. The settings in the table are the factory defaults. Digital inputs or digital outputs can be appropriately used by setting the DI/DO setting DIO16 to DIO61 engineering parameters. Functions can be set using the DI1F to DI6F and DO1F to DO6F engineering parameters.
Note 7: Using the terminals as fail output requires an external power supply.
Note 8: These terminals can be used as output tracking input if feedforward input or cascade setting input 2 is not used.
Note 9: If you change a function using the parameter concerned, enter the setting in the relevant field in the User settings column.

(2) YS1310/YS1350/YS1360

Terminal number	YS1310	YS1350	YS1360	User settings (Note 7)
1 2	+ / – Measurement input 2 (1-5V DC)	+ / – Measurement input 2 (1-5V DC)	+ / – Measurement input 2 (1-5V DC)	
3 4				
5 6	+ / – Measurement input 1 (1-5V DC)	+ / – Measurement input 1 (1-5V DC)	+ / – Measurement input 1 (1-5V DC)	
7 8			+ / – Manipulated output variable 1 (4 to 20mA DC) (Note 2)	
9 10				
11 12	+ / – High limit alarm setpoint for PV 1 output (Note 3)	+ / – High limit alarm output (Note 4)	+ / – High limit alarm output (Note 4)	
13 14	+ / – Low limit alarm setpoint for PV 1 output (Note 3)	+ / – Low limit alarm output (Note 4)	+ / – Low limit alarm output (Note 4)	
15 16		+ / – Setpoint value output (1-5V DC)	+ / – Manipulated output variable 2 (1-5V DC)	
17 18				
19	Grounding terminal	Grounding terminal	Grounding terminal	
20 21	+ / – OR output of high-high limit alarm output for PV 2 and low-low limit alarm output for PV 2 (Note 3)	+ / – No function (Factory default) (Note 3)	+ / – No function (Factory default) (Note 3)	
22 23	+ / – OR output of high limit alarm output for PV 2 and low limit alarm output for PV 2 (Note 3)	+ / – No function (Factory default) (Note 3)	+ / – No function (Factory default) (Note 3)	
24 25	+ / – Low-low limit alarm output for PV 1 (Note 4)	+ / – C/M status output (Note 5)	+ / – C/M status output (Note 5)	
26 27	+ / – High-high limit alarm output for PV 1 (Note 4)			
28	– FAIL output (Note 6)	– FAIL output (Note 6)	– FAIL output (Note 6)	
29	+ Power supply L1	+ Power supply L1	+ Power supply L1	
30 31				
32 33	+ / – Output of the direct input signal (1-5V DC)	+ / – Output of the direct input signal (1-5V DC)	+ / – Output of the direct input signal (1-5V DC)	
34	Connection of transmitter supply power (24V DC)	Connection of transmitter supply power (24V DC)	Connection of transmitter supply power (24V DC)	
35 36	Communication terminal SG Communication terminal SDA (–) Communication terminal SDB (+) Communication terminal RDA (–) or LCS (+) Communication terminal RDB (+) or LCS (–)	Communication terminal SG Communication terminal SDA (–) Communication terminal SDB (+) Communication terminal RDA (–) or LCS (+) Communication terminal RDB (+) or LCS (–)	Communication terminal SG Communication terminal SDA (–) Communication terminal SDB (+) Communication terminal RDA (–) or LCS (+) Communication terminal RDB (+) or LCS (–)	
	+ – Direct input terminals	+ – Direct input terminals	+ – Direct input terminals	
37				
38	+ FAIL output (Note 6)	+ FAIL output (Note 6)	+ FAIL output (Note 6)	
39	– Power supply L2	– Power supply L2	– Power supply L2	

Note

Do not use an unused terminal as a relaying terminal, etc.

Note 1: The functions in the shaded areas or those described in shaded characters are not available in the EK or HOMAC-compatible housings.
Note 2: If manipulated output variable 1 is not used, short-circuit these terminals.
Note 3: The settings in the table are the factory defaults. Functions can be set using the DI1F and DI2F engineering parameters.
Note 4: Using these terminals as digital output requires an external power supply. The settings in the table are the factory defaults. Digital inputs or digital outputs can be appropriately used by setting the DI/DO setting DIO16 engineering parameter. Functions can be set using the DI1F and DO1F to DO6F engineering parameters.
Note 5: Using these terminals as digital output requires an external power supply.
Note 6: Using the terminals as fail output requires an external power supply.
Note 7: If you change a function using the parameter concerned, enter the setting in the relevant field in the User settings column.

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4.1 Replacement with YS80-compatible Type

Replace the YS80 and its housing with the YS1000. The model and suffix codes are YS1□□ 0-04 □.

4.2 Panel Mounting Method

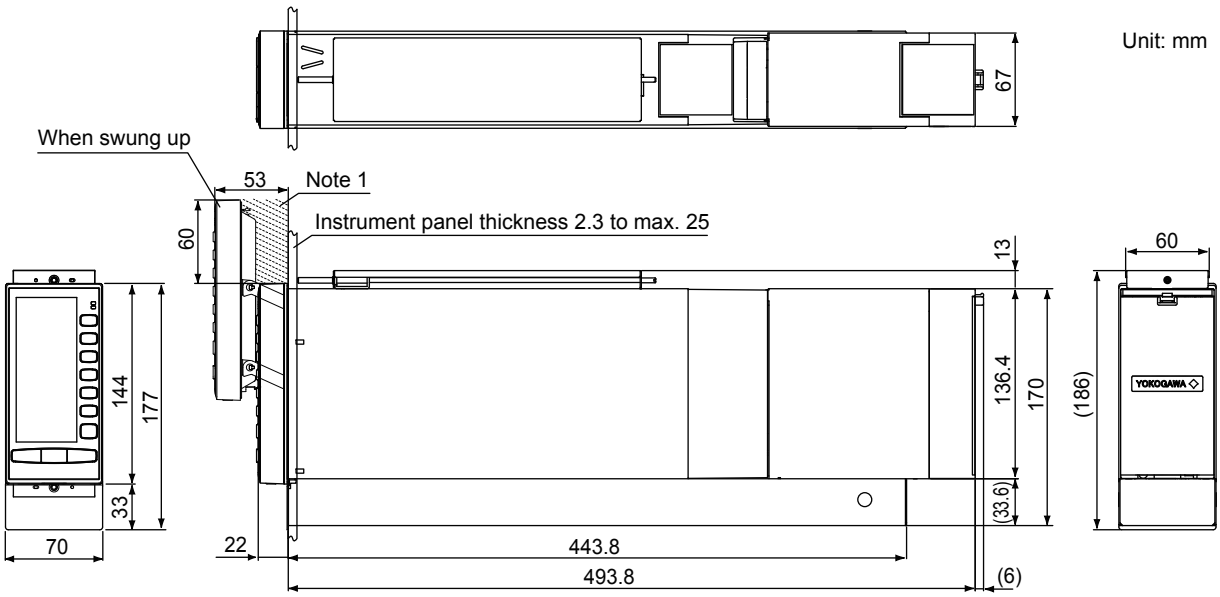
Follow the same procedure as for the YS80.
If the YS1000 is installed at an end in single mounting or side-by-side mounting, the separately sold mounting kit (MTY) is required.

► Mounting: Installation Manual for Panel-mounted Instruments (IM 1B4F1-01E)

4.3 YS1□□0-04□ External Dimensions

4.3.1 External Dimensions

Unit: mm

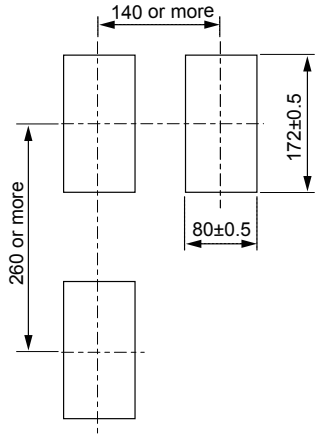


Weight: 3.4 kg (excluding mounting kit)

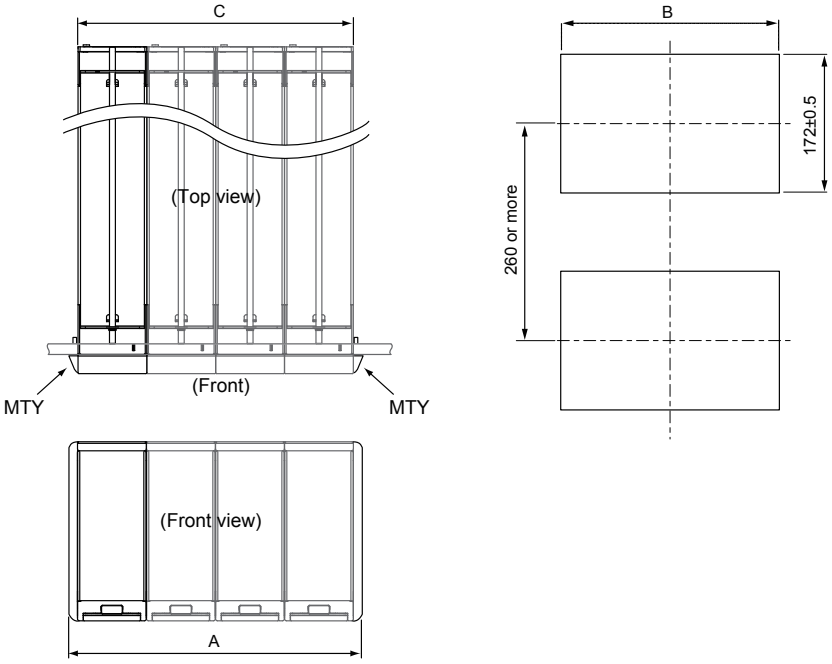
Note 1: If a nameplate, etc. is installed within 60 mm above the instrument, the thickness of the nameplate, etc. must be 30 mm or less from the panel surface.
Note 2: To ensure good air ventilation, allow space of 100 mm or more at the top and bottom of the panel.
Note 3: General tolerance = ± (value of tolerance class IT18 based on JIS B 0401-1998) / 2

4.3.2 Panel Cutout Dimensions

For Single Mounting



For Side-by-side Mounting



Number of Units / Location	1	2	3	4	5	6	7	8
A*	87	159	229	300	370	442	512	583
B	$80^{\pm0.5}$	$150^{\pm0.5}$	220^{+1}_{0}	291^{+1}_{0}	$361^{+1.5}_{0}$	$433^{+1.5}_{0}$	$503^{+1.5}_{0}$	$574^{+1.5}_{0}$
C	70	140	210	280	350	420	490	560

Number of Units / Location	9	10	11	12	13	14	15
A*	653	723	794	864	935	1005	1075
B	$644^{+1.5}_{0}$	$714^{+1.5}_{0}$	$785^{+1.5}_{0}$	$855^{+1.5}_{0}$	$926^{+1.5}_{0}$	$996^{+1.5}_{0}$	1066^{+2}_{0}
C	630	700	770	840	910	980	1050

*: The numerical values in line A include the MTY's bezels.

Note

If the YS1000 is mounted at an end in single mounting or side-by-side mounting, attach the separately sold mounting kit (MTY) to the housing.

4.4 Terminals Layout

The terminal shapes and arrangements are the same as the YS1□□0-02□.

► Terminals Layout: "2.4 Terminals Layout" and "2.5 Terminal Arrangment Table" in this manual.

Note

Compatible type for YS80: YS1□□0-04□/A02, an external RJC is connected. This is different from the existing YS100s.

Connect the provided RJC to terminals 20 and 21. (Mount the RJC at the terminal 21 side.)

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5.1 Replacement with 100 Line-compatible Type

Replace the 100 line with the YS1000. The model and suffix codes are YS1□□0-05□. Install the YS1000 in the YS006 housing and then replace the 100 line with the YS1000. The YS006 can be used with the YS1oo0-050 (100V AC, 24V DC common power supply) and YS1oo0-051 (220V AC power supply).

5.2 Panel Mounting Method

Follow the same procedure as the YS80.
If the YS1000 is installed at an end in single mounting or side-by-side mounting, the separately sold mounting kit (MTP) is required.

► Mounting: Installation Manual for Panel-mounted Instruments (IM 1B4F1-01E)

5.3 Housing Mounting Method

5.3.1 Mounting to a Housing

1. Connect the housing's cable connector to the connector at the back of the YS1000.
2. Insert the YS1000 into the mounting kit by moving it along the housing frame until you hear a click, which means the case is now fitted into and fastened to the housing.

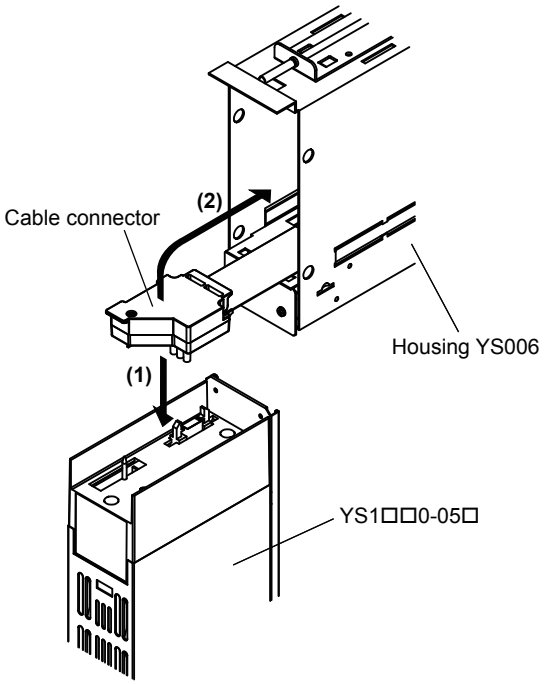


Figure 5.1 Connecting the connector of YS006

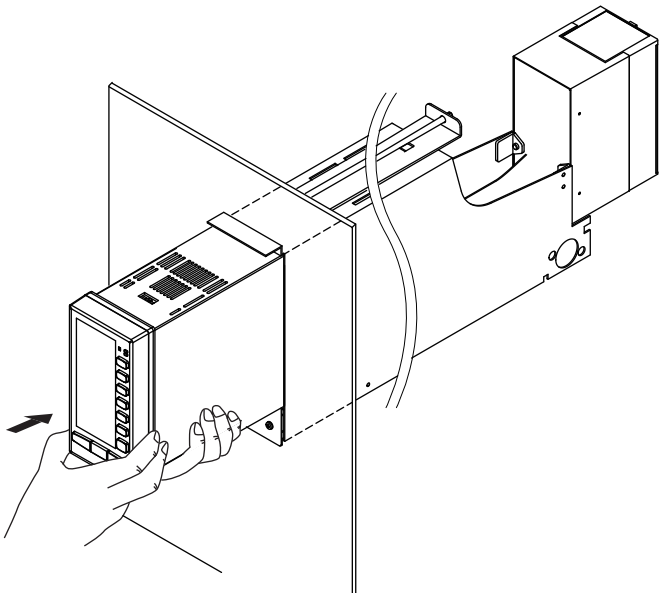


Figure 5.2 Inserting YS1000 into a Housing

5.3.2 Removing the YS1000

Prepare a flat-blade screwdriver (with an end size of 7 mm or less).

1. Insert the screwdriver into the clearance at the lower part of the stopper key. This causes the stopper key to be lifted up.
2. With the screwdriver inserted, pull out the YS1000 from the housing.
3. Disconnect the cable connector of the housing from the connector at the back of the YS1000.

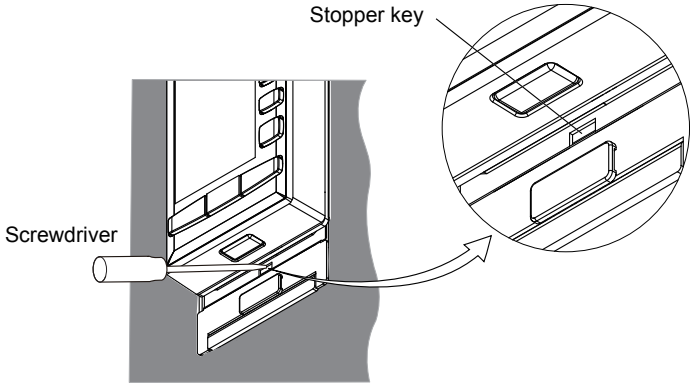


Figure 5.3 Inserting Screwdriver into Clearance

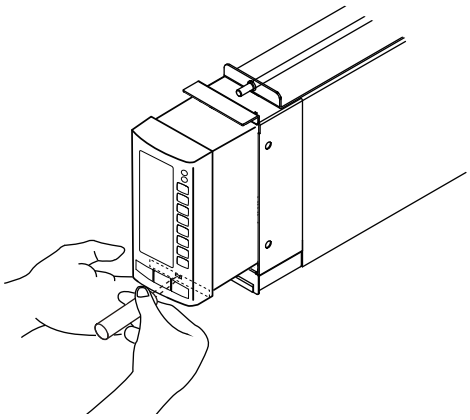
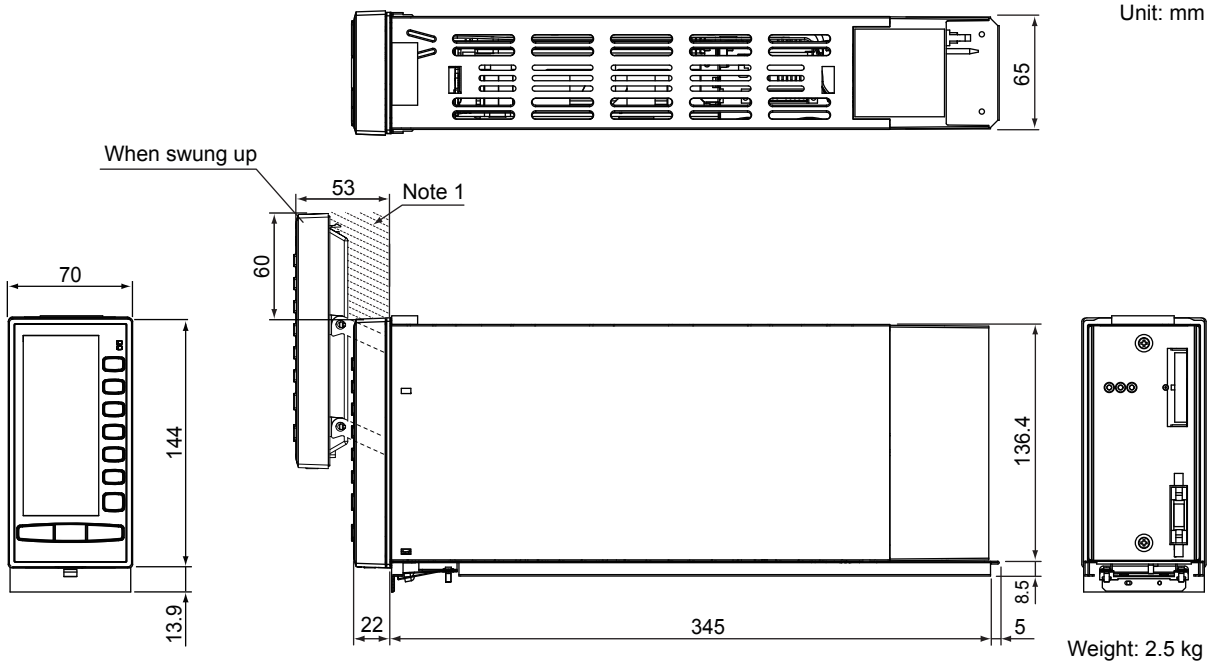


Figure 5.4 Pulling YS1000 out of the Housing

5.4 YS1□□0-05□ External Dimensions

Unit: mm



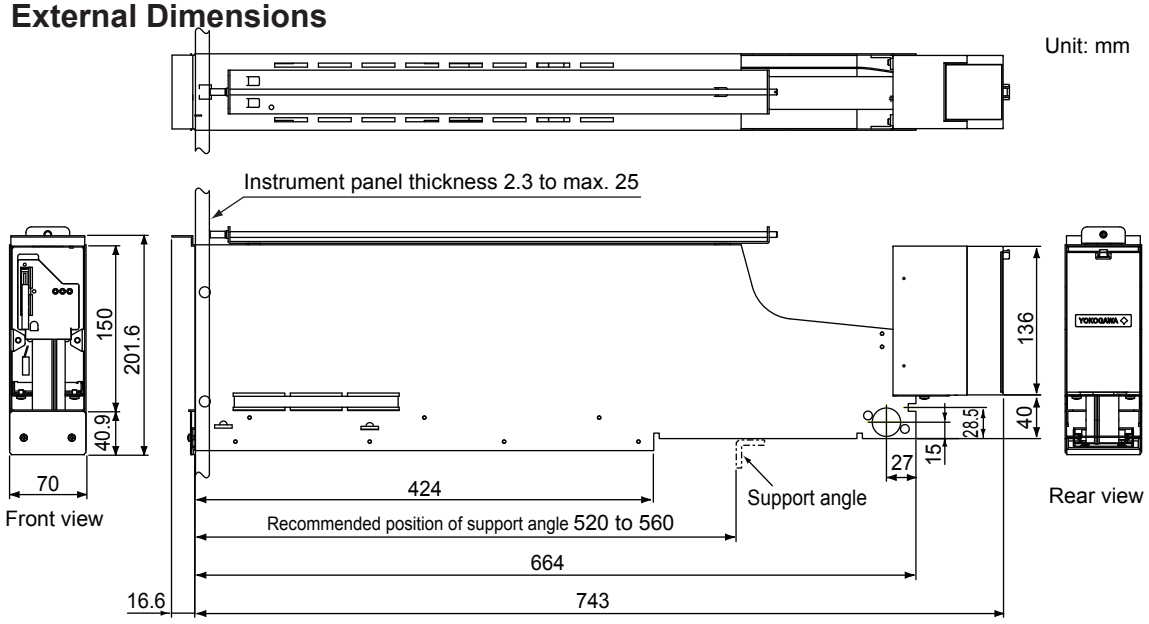
Weight: 2.5 kg

Note 1: If a nameplate, etc. is installed within 60 mm above the instrument, the thickness of the nameplate, etc. must be 30 mm or less from the panel surface.
Note 2: To ensure good air ventilation, allow space of 100 mm or more at the top and bottom of the panel.
Note 3: General tolerance = ± (value of tolerance class IT18 based on JIS B 0401-1998) / 2

5.5 YS006 (100 Line-compatible Housing) External Dimensions

5.5.1 External Dimensions

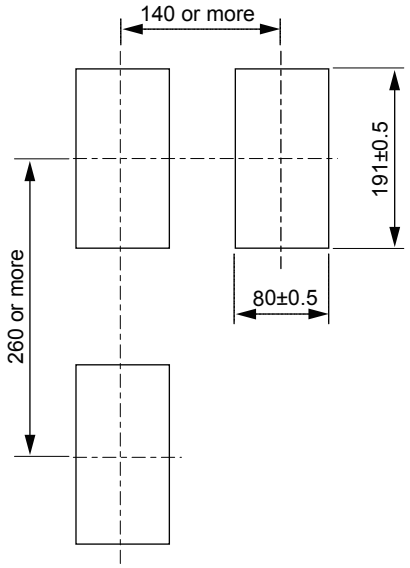
Unit: mm



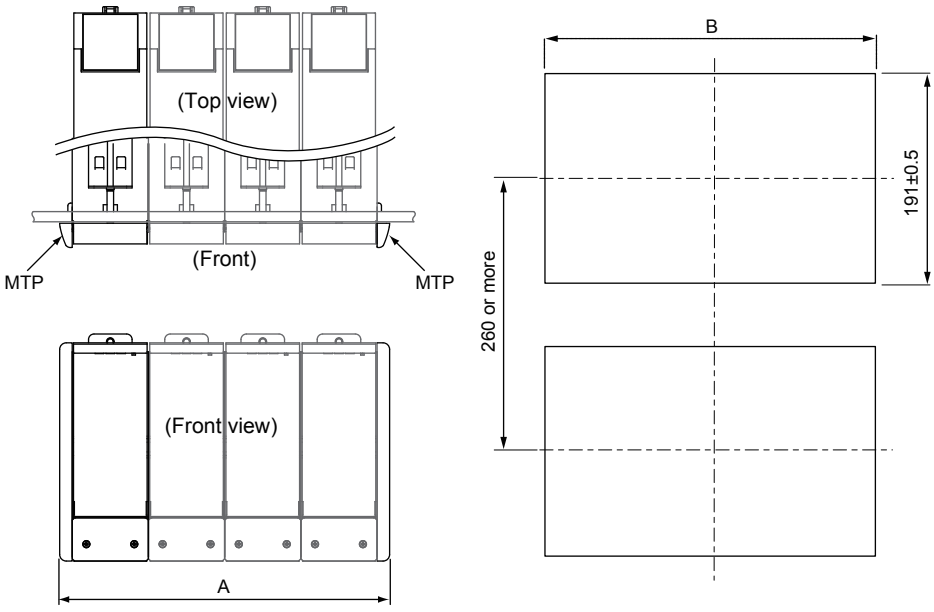
Weight: 4.3 kg (excluding mounting kit)

5.5.2 Panel Cutout Dimensions

For Single Mounting



For Side-by-side Mounting



Number of Units / Location	1	2	3	4	5	6	7	8
A*	90	162	232	303	373	445	515	586
B	$80^{\pm0.5}$	$150^{\pm0.5}$	220^{+1}_{0}	291^{+1}_{0}	$361^{+1.5}_{0}$	$433^{+1.5}_{0}$	$503^{+1.5}_{0}$	$574^{+1.5}_{0}$

Number of Units / Location	9	10	11	12	13	14	15
A*	656	726	797	867	938	1008	1078
B	$644^{+1.5}_{0}$	$714^{+1.5}_{0}$	$785^{+1.5}_{0}$	$855^{+1.5}_{0}$	$926^{+1.5}_{0}$	$996^{+1.5}_{0}$	1066^{+2}_{0}

*: The numerical values in line A include the MTP's bezels.

Note

If the YS1000 is mounted at an end in single mounting or side-by-side mounting, attach the separately sold mounting kit (MTP) to the housing.

5.6 Terminals Layout

The terminal shapes and arrangements are the same as the YS1□□0-02□.

► Terminals Layout: "2.4 Terminals Layout" and "2.5 Terminal Arrangement Table" in this manual.

Note

Compatible type for 100 line: YS1□□0-05□/A02, an external RJC is connected. This is different from the existing YS100s.
Connect the provided RJC to terminals 20 and 21. (Mount the RJC at the terminal 21 side.)

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